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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,828	07/28/2003	Wulf Bramer	100727-53/Heraeus 405-KGB	5851
27384	7590	10/26/2005	EXAMINER	
NORRIS, MCLAUGHLIN & MARCUS, PA 875 THIRD AVENUE 18TH FLOOR NEW YORK, NY 10022			VAN, LUAN V	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,828

Applicant(s)

BRAMER ET AL.

Examiner

Luan V. Van

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/29/03 12/29/05

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 1-9 in the reply filed on October 11, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). The applicant provided a quote relating to a restriction of a product and process in the remarks; however, the instant restriction relates to an apparatus and a process. The restriction is proper because the apparatus as claimed can be used to practice another and materially different process such as electropolishing. The Applicant has not shown why the claimed apparatus cannot be used to practice the method proposed by the examiner.

Specification

The disclosure is objected to because of the following informalities: sections entitled Background of the Invention, Summary of the Invention, Brief Description of the Drawings, and Description of the Invention should be included in the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 5-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruebel in view of Ehrhardt and Palaika et al.

Regarding claims 1-3, Ruebel teaches a device for electrodepositing metallic, prosthetic, molded, dental components, whereby the device has: a beaker for accommodating an electrolyte bath (column 6 lines 31-37), a stirring system for moving the electrolyte bath (column 6 lines 60-64), a heating system for heating the electrolyte bath (column 3 lines 18-26), at least one anode (figure 1, anode 4) and at least one cathode (figure 2, cathode 16), and a unit for supplying electricity that is connected to the at least one anode and to the at least one cathode (Examples).

The difference between the reference to Ruebel and the instant claims is that the reference does not explicitly teach that the heating system is formed from an infrared emitter whose main emission is in the 0.5 um to 1000 um range of wavelengths.

Ehrhardt teaches heating a plating solution in a glass beaker "by means of a 250 watt infrared lamp and a thermistor temperature controller unit. The lamp was positioned approximately 1.5 in. from the side of the beaker and directed toward the top half of the solution" (column 2 lines 33-40).

Palaika et al. teach a method of heating or baking of an electrodeposited coating by means of infrared radiation ("IR"). Furthermore, Palaika et al. teach "Generally, there are three categories of IR. These categories are: near-IR (short wavelength) having a peak wavelength from 0.75 to 2.5 microns ("u") (750 to 2500 nanometers); intermediate-IR (medium wavelength) having a peak wavelength from 2.5 to 4 u (2500 to 4000 nanometers), and far-IR (long wavelength) having a peak wavelength from 4 to 1000 u (4000 to 100,000 nanometers). Any or any combination or all of these categories of IR can be used for the heating to at least partially cure the coating" (column 5 lines 31-41). Although the method of Palaika et al. is directed to heating or baking of an electrodeposited coating, it does not teach away from applying infrared heating to other substances, such as a plating solution. Nevertheless, Palaika et al. teach the infrared radiation by definition has a range of wavelengths from 0.75 to 1000 μm .

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Ruebel by heating the solution with the infrared lamp of Ehrhardt, because heating the solution with the infrared lamp increases

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the electrodeposition rate. Further, it would have been obvious to one having ordinary skill in the art to recognize that the infrared lamp of Ehrhardt would emit an infrared with the wavelength of the instant claims, because Palaika et al. teach that the infrared radiation by definition has a range of wavelengths from 0.75 to 1000 μm .

Regarding claim 5-6, the infrared lamp of Ehrhardt would be suitable for producing either polychromatic or monochromatic radiation. Furthermore, it would have been obvious to one having ordinary skill in the art to use either polychromatic or monochromatic radiation, because polychromatic and monochromatic radiation are suitable for heating a solution.

Regarding claim 8, Ruebel teaches a temperature sensor is present for measuring the temperature of the electrolyte bath (column 6 lines 60-64).

Regarding claim 9, Ruebel teaches the anode and the cathode are attached to a lid that is suitable for sealing the glass beaker (figures 1-2).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ruebel in view of Ehrhardt and Palaika et al., and further in view of Grenon.

Ruebel, Ehrhardt and Palaika et al. teach the apparatus as described above in addressing claim 1.

The difference between the references and the instant claims is that the references do not explicitly teach the glass beaker is formed from quartz glass.

Grenon teaches that a quartz beaker is a suitable container for an electroplating process (column 3 lines 52-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined apparatus of Ruebel, Ehrhardt and Palaika et al. by using the quartz beaker of Grenon, because a quartz beaker is transparent to infrared radiation and is a suitable container for an electroplating.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ruebel in view of Ehrhardt and Palaika et al., and further in view of Kyriacou et al.

Ruebel, Ehrhardt and Palaika et al. teach the apparatus as described above in addressing claim 1.

The difference between the references and the instant claims is that the references do not explicitly teach the stirring system is a magnetic stirring system..

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Kyriacou et al. teach that the stirring system is a magnetic stirring system for an electroplating process (column 16 lines 55-58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined apparatus of Ruebel, Ehrhardt and Palaika et al. by using the magnetic stirring system of Kyriacou et al., because magnetic stirring is simple and inexpensive and is suitable for agitating a solution in a beaker.

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. Segawa et al. teach heating a plating solution using infrared radiation (paragraph 237).

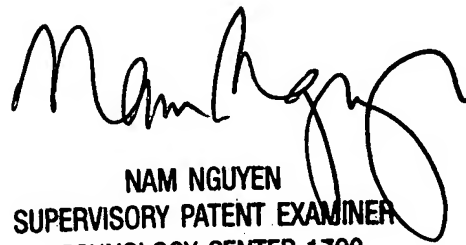
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan V. Van whose telephone number is 571-272-8521. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LWV
10/19/2005



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